



9.25 Township of Morris

This section presents the jurisdictional annex for the Township of Morris.

9.25.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan's primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Name: James Slate Address: 50 Woodland Avenue, PO Box 7603 Phone: 973-326-7443 E-mail: jslate@morristwp.com	Name: Timothy Quinn Address: 50 Woodland Avenue, PO Box 7603 Phone: 973-326- 7361 E-mail: tquinn@morristwp.com

9.25.2 Municipal Profile

The Township of Morris is located in the central region of Morris County; it is bordered by Morris Plains, Parsippany-Troy Hills and Hanover to the north, Florham Park and Madison to the east, Harding to the south and the Township of Mendham and Randolph to the west. Major roadways in the Township include US 202, State Highway 24, and Interstate 287. Major waterways that flow through the Township include the Whippany River and smaller streams and tributaries. According to the U.S. Census, the 2010 population for the Township was 22,306, and the total area is 15.76 square miles, 15.62 square miles of land and 0.14 square miles of water. The Township has four unincorporated communities, Collinsville, Convent Station, Fairchild and Washington Valley.

The Township is also partially located in the New Jersey Highlands Region, one of the 88 municipalities protected by and subject to the provisions of the Highlands Water Protection and Planning Act. The entire Township is located within the Highlands Planning Area (10,120 acres).

Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in section 9.25.9 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.25-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Block & Lot)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2010 to present					
Montessori Children's Academy	Commercial	15,000 SF	6 Kahn Road, Block 8602, Lots 1&2	NEHRP: D	Developed
Known or Anticipated Development in the Next Five (5) Years					
James Place	Residential	92 Units	250 James Street, Block 7101, Lot 1	Flood Plain on Property	Currently being developed
Wheatsheaf	Residential	23 Units	Kahdena Road and Deborah Drive, Block 3103, Lot 60	None	Currently being developed



Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Block & Lot)	Known Hazard Zone(s)	Description/Status of Development
Honeywell/Rock	Residential	235 Units	101 Columbia Turnpike, Block 9101, Lot 4	NEHRP: D	Currently seeking approval
Honeywell/Rock	Commercial	800,000 SF	101 Columbia Turnpike, Block 9101, Lot 4	NEHRP: D	Currently seeking Approval
Brownstones	Residential	13 Units	Howland Terrace, Block 8402, Lot 8	NEHRP: D	Currently being developed

* Only location-specific hazard zones or vulnerabilities identified.

9.25.3 Natural Hazard Event History Specific to the Municipality

Morris County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2008 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.25-2. Hazard Event History

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
March 12 – April 15, 2010	Severe Storms and Flooding	DR-1897	Yes	Yes- Closure of low lying roads – minor debris cleanup
December 26-27, 2010	Severe Winter Storm and Snowstorm	DR-1954	Yes	Yes – Heavy DPW Overtime
August 26 – September 5, 2011	Hurricane Irene	EM-3332 DR-4021	Yes Yes	Yes – Closure of low lying roads – heavy debris cleanup – sewer plant flooded – major power outages
September 28 – October 6, 2011	Remnants of Tropical Storm Lee	DR-4039	No	Yes – Closure of low lying roads – debris cleanup – sewer plant flooding
October 29, 2011	Severe Storm	DR-4048	Yes	Yes – Road closures, heavy debris cleanup
October 26 – November 8, 2012	Hurricane Sandy	EM-3354 DR-4086	Yes Yes	Yes – Road closures due to downed trees and hazardous conditions, major power outages, shelters opened, heavy debris cleanup



9.25.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Township of Morris. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of Morris.

Table 9.25-3. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Drought	Damage estimate not available	Frequent	27	Medium
Dam Failure	Damage estimate not available	Rare	6	Low
Earthquake	500-year MRP: \$6,972,582 2,500-year MRP: \$130,965,086	Occasional	32	High
Extreme Temperature	Damage estimate not available	Frequent	27	Medium
Flood	1% Annual Chance: \$749,670	Frequent	18	Medium
Geological Hazards	Exposed to Class A and Class B: \$32,746,787	Occasional	12	Low
Severe Storm	100-Year MRP: \$6,069,058 500-year MRP: \$35,960,754 Annualized: \$377,308	Frequent	48	High
Winter Storm	1% GBS: \$84,232,306 5% GBS: \$421,161,532	Frequent	54	High
Wildfire	Estimated Value Exposed to Extreme, Very High and High: \$8,917,766	Rare	6	Low
Disease Outbreak	Damage estimate not available	Frequent	36	High
Hazardous Materials	Damage estimate not available	Frequent	36	High
Infestation	Damage estimate not available	Frequent	18	Medium

Notes:

- Building damage ratio estimates based on FEMA 386-2 (August 2001)
- The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20
- Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- Loss estimates for the flood and earthquake hazards represent both structure and contents.
- The HAZUS-MH earthquake model results are reported by Census Tract.



National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Morris.

Table 9.25-4. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)
Township of Morris	97	50	\$822,534.96	1	1	10

Source: FEMA Region 2, 2014

(1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of 9/30/2014. Please note the total number of repetitive loss properties includes the severe repetitive loss properties. The number of claims represents claims closed by 9/30/14.

(2) Total building and content losses from the claims file provided by FEMA Region 2.

(3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.

Number of policies and claims and claims total exclude properties located outside County boundary, based on provided latitude and longitude.

Critical Facilities

The table below presents HAZUS-MH estimates of the damage and loss of use to critical facilities in the community as a result of a 1- and 0.2-percent annual chance flood events.

Table 9.25-5. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event		
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	Days to 100-Percent ⁽¹⁾
Butterworth Sewage Treatment Plant	Wastewater		X	-	-	-
Morris Township Fire Department Station 5 (HQ)	Fire	X	X	0	0	480
Township of Morris Police Department	Police	X	X	0	0	480

Source: HAZUS-MH 2.1

Note (1): HAZUS-MH 2.1 provides a general indication of the maximum restoration time for 100% operations. Clearly, a great deal of effort is needed to quickly restore essential facilities to full functionality; therefore this will be an indication of the maximum downtime (HAZUS-MH 2.1 User Manual).

Note (2): In some cases, a facility may be located in the DFIRM flood hazard boundary; however HAZUS did not calculate potential loss. This may be because the depth of flooding does not amount to any damages to the structure according to the depth damage function used in HAZUS for that facility type. Further, HAZUS-MH may estimate potential damage to a facility that is outside the DFIRM because the model generated a depth grid beyond the DFIRM boundaries.

NA Not available

X Facility located within the DFIRM boundary

- Not calculated by HAZUS-MH 2.1

Other Vulnerabilities Identified

According to the 2010 preliminary FEMA Flood Insurance Study (FIS) for Morris County, factors which affect flooding in Morris Township include increased runoff from development, steep land slopes, and low permeability of the soils. Flooding in the Township occurs along Whippany River, Watnong Brook, Great Brook, and Loantaka Brook. Problem flooding areas identified in the Township include the area near



Whippany River at the Washington Valley Road crossing. This has caused road closures. Whitehead Road that crosses Whippany River closes due to flooding. During large storm events the Whippany River floods the Butterworth Sewer Treatment Plant. During heavy storms, Watnong Brook overflows its banks at Tracy Court and Bromleigh Way repeatedly due to backwater effects from the Whippany River. The area along Loantaka Brook and its tributaries at Johnston Drive, Arborway, Woodland Avenue (including The Police Station), Fanok Road, Dwyer Lane, Hillview Terrace, and Symor Drive have all flooded during severe rainstorms. Flooding occurs in the neighborhood of Western Avenue in the area of Molly Stark and Searing Avenue, an existing culvert collects debris, backs up and floods the area. Lastly, several homes on Whitney Avenue adjacent to Great Brook, east of I-287, have reported flood problems (FEMA FIS 2010).

9.25.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Township of Morris.

Table 9.25-6. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Master Plan	Yes	Local	Planning Board	Master Plan
Capital Improvements Plan	Yes	Local	Township Committee	Township Committee funds projects such as culvert replacements and erosion control for hazard mitigation
Floodplain Management / Basin Plan	Yes	Local	Township Engineer	New development is reviewed to ensure new structures are not built in the various flood plains; Flood Acquisition Plan (with Morris County)
Stormwater Management Plan	Yes	Local	Township Engineer	New development provides stormwater management to offset increases in runoff and maintain ground water recharge
Open Space Plan	Yes	Local	Open Space Committee	Open Space purchased to limit development
Stream Corridor Management Plan	Yes	County	Mosquito Commission	Stream Corridors maintained by Mosquito Commission to eliminate snags and reduce potential flooding
Watershed Management or Protection Plan	Yes	Local	Township Engineer	Watershed managed to ensure proper development and stormwater management



Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Economic Development Plan	Yes	Local	Township Committee	Economic Development Committee steers development into appropriate areas
Comprehensive Emergency Management Plan	Yes	Local	OEM	Plan used to guide OEM operations to ensure efficient operations during events
Emergency Response Plan	Yes	Local	OEM/PD/FD	Planning ensures proper equipment available in the event of an emergency
Post-Disaster Recovery Plan	Yes	Local	OEM	Planning ensures quick recovery and restoration
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans: Flood Acquisition Plan	Yes	Local/County	Township Engineer	Repetitive loss properties purchased to reduce losses and eliminate hazard
Regulatory Capability				
Building Code	Yes	State & Local	Construction Code Official	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Zoning Officer	Chapter 95
Subdivision Ordinance	Yes	Local	Planning Board	Chapter 57, Part 3
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Township Engineer	Chapter 273 (Flood Damage Prevention)
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local	NJDEP/FEMA	
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	Local	Township Engineer	Chapter 57, Part 4
Stormwater Management Ordinance	Yes	Local	Township Engineer	Chapter 57, Part 5
Municipal Separate Storm Sewer System (MS4)	Yes	Local	DPW	Maintenance of facilities helps reduce potential flooding hazards
Natural Hazard Ordinance	Yes	Local		Chapter 49; 76; 77
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State	Division of Consumer Affairs	N.J.A.C. 13:45A-29.1
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes	Local	Township Engineer/PB	Underground utilities, stormwater management, Tree Removal and Steep Slopes Ordinance, and stream corridor easements



Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Township of Morris.

Table 9.25-7. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	Yes	OEM/Township Administrator
Environmental Board/Commission	Yes	Environmental Commission
Open Space Board/Committee	Yes	Open Space Committee
Economic Development Commission/Committee	Yes	Township Committee
Maintenance Programs to Reduce Risk	Yes	DPW
Mutual Aid Agreements	Yes	FD/PD
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Professional Contractors and Township Engineer
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Engineering and Building Department
Planners or engineers with an understanding of natural hazards	Yes	Township Engineer
NFIP Floodplain Administrator	Yes	Township Engineer
Surveyor(s)	Yes	Consultant
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	Engineering
Scientist familiar with natural hazards	Yes	Engineering Department
Emergency Manager	Yes	PD/FD/OEM
Grant Writer(s)	Yes	Engineering Department and Consultants
Staff with expertise or training in benefit/cost analysis	Yes	Engineering Department
Professionals trained in conducting damage assessments	Yes	Engineering

Fiscal Capability

The table below summarizes financial resources available to the Township of Morris.

Table 9.25-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes - Sewer
Impact Fees for homebuyers or developers of new development/homes	Yes
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No



Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes – Morris County Flood Mitigation Program (acquisitions)
Other	

Community Classifications

The table below summarizes classifications for community program available to the Township of Morris.

Table 9.25-9. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4	5/19/10
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4	12/1/14
Storm Ready	No	NP	N/A
Firewise	No	NP	N/A
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	NP		
Public Education Program/Outreach (through website, social media)	NP		
Public-Private Partnerships	NP		

N/A = Not applicable. NP = Not participating. - = Unavailable. TBD = To be determined.

The classifications listed above relate to the community's ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community's capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO's Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>



- The National Firewise Communities website at <http://firewise.org/>

Self-Assessment of Capability

The table below provides an approximate measure of Morris's capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.25-10. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and Regulatory Capability			X
Administrative and Technical Capability			X
Fiscal Capability			X
Community Political Capability			X
Community Resiliency Capability			X
Capability to Integrate Mitigation into Municipal Processes and Activities.			X

National Flood Insurance Program

NFIP Floodplain Administrator

James Slate, Township Engineer

Flood Vulnerability Summary

A formal list of flood-damaged properties and property owner's interest in pursuing mitigation is maintained by the Township; the Township is currently working with Morris County and property owners interested in acquisition. During Hurricane Irene, many homes experienced basement flooding due to extended power outages without backup power for sump pumps, as well as flooding at the Butterworth Sewer Treatment Plant. During Hurricane Sandy, 24 homes were damaged by fallen trees and approximately 6 homes experienced severe structural damage as a result of fallen trees.

The Township completed Substantial Damage estimates for homes with severe structural damage during Hurricane Sandy, as well as with any major storm event. There are two residential property owners interested in acquisition, and work is currently being done on a mitigation project at the Butterworth Sewer Treatment Plant to provide flood protection. The Township is funding the mitigation project.

Resources

The Engineering Department is staffed with two other licensed engineers who help out with floodplain administration. The Department reviews permits to ensure compliance with Flood Plain Regulation, completes inspections and damage assessments, and maintains and updates our GIS system to show floodplains and track elevation certificates. Additionally, the Department educates the public on issues related to development in or adjacent to floodplains, and also assists property owners with elevation certificates.

Compliance History

There are currently no outstanding compliance issues with the NFIP.



Regulatory

The Township's floodplain management regulations and ordinances currently exceed that of FEMA and State minimum requirement. In addition to regulations and ordinances, the Planning Board and Board of Adjustment consider efforts to reduce flood risk when reviewing applications. The Township of Morris does not participate in the Community Rating System (CRS) program.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

Planning

Morris Township incorporates Hazard Mitigation into our planning process. The Planning Board Master Plan takes hazards into consideration and works toward addressing existing and future issues. In the 2007 Master Plan Reexamination, the Township cites the creation of three ordinances from the Wastewater Management Plan; one of which requires an environmental impact statement for new development. When the Master Plan is updated we will continue to work on mitigating potential hazards.

The 2004 Open Space and Recreation Plan Update details the goals and objectives for preserving and protecting open space and environmental sensitive lands in the Township. In 1992, an Open Space Trust Fund of 1 cent per \$100 of assessed value was established to fund open space acquisition projects; by 2004, the Township had used the funds to acquire 214 acres of open space.

The Township of Morris participates in the County's Flood Mitigation Program (FMP) and has an approved Flood Acquisition Plan (FLAP). The Morris County FMP is the first dedicated, county-level flood acquisition program in the State of New Jersey. The FMP allows Morris County to assist municipalities in moving people out of harm's way, lowering municipal costs due to intense flooding episodes, and create natural flood capture and storage areas which protect the remaining homes and businesses. The FMP is funded by the Morris County Open Space tax and provides grant monies for municipalities to purchase flood-prone residential properties. In addition to MATCH funding available for projects with state or federal monies, Morris County has CORE funding in which the County takes the lead grant role, providing up to 75% of the cost of acquisition. To access this CORE funding, a municipality must have a FLAP. The FLAP is a dynamic, essential tool for understanding the unique flood hazards to residential homes within each community. Working closely with the municipality, Morris County creates this detailed, comprehensive analysis of the historic and current flood risks free of charge. A wide array of data is utilized from sources such as: FEMA, National Flood Insurance Program, USACE Flood Studies, USGS stream gage data, topography and soil analysis. All land acquired with MATCH and CORE funding within the FMP is permanently deed-restricted, preserved open space, available for public use as an active or passive recreation area. The acquired land is municipal-owned and managed in perpetuity.

Regulatory and Enforcement

The Planning Board, Board of Adjustment, Building and Engineering Departments ensure the applicable ordinances are followed to help prevent development in areas that have the potential to create a hazard. Ordinances have been developed over the years to prevent development in flood prone areas, to limit disturbance of steep slopes, to provide tree protection, stream setbacks, stormwater recharge, and stormwater management.



Operational and Administration

The Office of Emergency Management, Fire, Police and Engineering Departments and Department of Public Works all work together to address issues to help mitigate potential hazards. If one Department sees a problem that can be addressed we will put together a plan to eliminate or reduce the potential hazard. In addition to aiding Departments within the town, the fire and police departments have mutual aid agreements that allow surrounding communities to provide and receive additional support during an emergency event.

Fiscal

The Township Committee supplies capital and operating funds to address hazard mitigation projects which are supported by the public and have a high cost to benefit ratio. All of our current hazard mitigation projects are funded by local funds. The Township also has an Open Space Trust Fund that is used to fund open space acquisition projects.

Education and Outreach

The various Departments work to educate the public about hazard mitigation. The Morris Township web site is use on a regular basis to distribute information and emails are used to distribute information about preparedness for storm events and to make the public aware of resources available during storm events. The Township is constantly expanding the email list to ensure the information gets out to as many residents as possible. The Township also uses the Nixle emergency notification system to provide residents with up-to-date.

9.25.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2010 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.25-11. Past Mitigation Initiative Status

2010 Mitigation Action	Lead	Status (In progress, No progress, Complete)	Describe Status <ul style="list-style-type: none"> Please describe what was accomplished and indicate % complete. If there was no progress, indicate what obstacles/delays encountered? If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)? 	Next Step (Include in 2015 HMP or Discontinue)	Describe Next Step <ul style="list-style-type: none"> If including action in 2015 HMP, revise/reword to be more specific (as appropriate). If discontinuing, explain why.
Morris 1: Construction of a detention basin to mitigate upstream on Loantaka Brook.	Township Engineers	In Progress	Watershed study has been funded by Morris Township and was awarded to consultant. Recommendations/report to be completed in 2015	Include in 2015 HMP	Review report when completed and secure funding for recommendations.
Morris 2: Replacement of the Fill-A-Belli Deli Culvert and detention basin construction.	Township Engineers	In Progress	Design completed, required permits obtained, finalizing plans for construction to go out to bid. Need to secure required easements. Morris Township has funding in place for project. Scheduled to be bid in 2015.	Include in 2015 HMP	Need to develop cost sharing agreement with Morris County. Need to obtain required easements and bid project for construction.
Morris 3: Backup power (generator) replacement for Police Station.	Township Engineers	Complete	Project Completed in 2012. Funded by Morris Township	Discontinue	Project completed
Morris 4: Backup power (generator) for Frelinghuysen Middle School (shelter).	Morris School District	Complete	Project completed in 2013. Funded by Morris School District	Discontinue	Project completed
Morris 5: Construction of a Salt Dome to mitigate snow hazard on roads.	Township Engineers	No Progress	Need to secure site for construction. Formal agreement required from property owner. Funding required.	Include in 2015 HMP	Continue to follow up with property owner to acquire required property for salt dome on east side of town.
Morris 6: Acquisition/elevation of 2 repetitive loss properties on Western Avenue.	Township Engineers	No Progress	Scheduled to meet with Morris County to develop required mapping. Funding required from Morris County and Morris Township	Include in 2015 HMP	Continue to follow up with County to advance acquisition of properties.
Morris 7: Acquisition/elevation of nine repetitive loss properties on Richlyn Avenue.	Township Engineers	No Progress	Letter sent to property owners to make them aware of Morris County acquisition program	Include in 2015 HMP	Continue to discuss acquisition options with property owners located in flood plain
Morris 8: Develop all-hazards public education and outreach program for hazard mitigation and preparedness.	County and Municipal OEM	In Progress	Have discussed hazard mitigation and preparation with various property owners and tenants located in flood prone areas.	Include in 2015 HMP	Continue to reach out to property owners to educate on hazard mitigation and preparedness



Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The municipality has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2010 Plan:

- The Township has not completed any additional mitigation projects or activities.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Township of Morris participated in a mitigation action workshop in January 2015 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013)..

Table 9.25-12 summarizes the comprehensive-range of specific mitigation initiatives the Township of Morris would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.25-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.25-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
TM-1 (Old Morris 1)	Construction of a detention basin to mitigate upstream on Loantaka Brook.	New	Flood	G-4	Township Engineers	High	High	FEMA; Municipal Budget	Short	High	SIP	PP
TM-2 (Old Morris 2)	Replacement of the Fill-A-Belli Deli Culvert and detention basin construction.	Existing	Flood	G-4	Township Engineers	High	High	FEMA; Municipal Budget	Short	High	SIP	PP
TM-3 (Old Morris 5)	Construction of a Salt Dome to mitigate snow hazard on roads.	New	Snow	G-4	Township Engineers	High	High	FEMA; Municipal Budget	Long	Medium	SIP	PP
TM-4 (Old Morris 6)	Acquisition/elevation of 2 repetitive loss properties on Western Avenue.	Existing	Flood	G-4	Township Engineers	High	High	FEMA; Municipal Budget	Short	High	SIP	PP
TM-5 (Old Morris 7)	Acquisition/elevation of nine repetitive loss properties on Richlyn Avenue.	Existing	Flood	G-4	Township Engineers	High	High	FEMA; Municipal Budget	Long	Low	SIP	PP
TM-6 (Old Morris 8)	Develop all-hazards public education and outreach program for hazard mitigation and preparedness.	New	All-Hazards	G-1	County and Municipal OEM	High	Low	FEMA; Municipal Budget	Long	Low	EAP	PI
TM-7	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority where applicable (Township has five RL properties) Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option (in progress) Phase 2: Work with the property owners to implement selected action based on available funding and local match availability											
	See above	Existing	Flood, Severe Weather, Severe Winter Weather	G-1, G-3, G-4	Township Engineers, NFIP FPA	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing (outreach and specific project identification); Long-term DOF (specific project application and implementation)	High	SIP	PP
TM-8	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	N/A	All-Hazard	G-2, G-3	County and Municipal OEM	Medium	Low	Municipal Budget	Short	Medium	EAP	ES



Table 9.25-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
TM-9	Support participation in the NFIP Community Rating System (CRS) program by attending CRS workshop(s) if offered within the county. Join the CRS program if adequate resources to support long term participation can be dedicated.	N/A	Flood	G-1, G-3	NFIP FPA; Municipal OEM	Medium - High	Low	Municipal Budget	Short (year 1)	High	EAP	PI

Notes:

Not all acronyms and abbreviations defined below are included in the table.

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
NJDEP	New Jersey Department of Environmental Protection
NJOEM	New Jersey Office of Emergency Management
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
PDM	Pre-Disaster Mitigation Grant Program
RFC	Repetitive Flood Claims Grant Program (discontinued 2015)
SRL	Severe Repetitive Loss Grant Program (discontinued 2015)

Timeline:

Short	1 to 5 years
Long Term	5 years or greater
OG	On-going program
DOF	Depending on funding

Costs:

Where actual project costs have been reasonably estimated:

Low	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where actual project costs cannot reasonably be established at this time:

Low	Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
-----	---

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low=	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low	Long-term benefits of the project are difficult to quantify in the short term.
-----	--



Costs:

- Medium Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
- High Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

- Medium Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
- High Project will have an immediate impact on the reduction of risk exposure to life and property.

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities



Table 9.25-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
TM-1 (Old Morris 1)	Construction of a detention basin to mitigate upstream on Loantaka Brook.	0	1	1	1	1	1	1	1	0	1	0	1	1	0	10	High
TM-2 (Old Morris 2)	Replacement of the Fill-A-Belli Deli Culvert and detention basin construction.	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
TM-3 (Old Morris 5)	Construction of a Salt Dome to mitigate snow hazard on roads.	1	0	1	1	1	1	1	0	0	0	0	0	0	0	6	Medium
TM-4 (Old Morris 6)	Acquisition/elevation of 2 repetitive loss properties on Western Avenue.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
TM-5 (Old Morris 7)	Acquisition/elevation of nine repetitive loss properties on Richlyn Avenue.	1	1	1	0	0	0	-1	0	-1	0	0	-1	1	0	1	Low
TM-6 (Old Morris 8)	Develop all-hazards public education and outreach program for hazard mitigation and preparedness.	0	-1	1	0	1	1	1	0	1	0	0	0	0	0	4	Low
TM-7	Support the mitigation of vulnerable structures	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
TM-8	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	1	1	1	1	0	0	1	0	0	1	1	1	0	1	9	Medium



Table 9.25-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
TM-9	Support participation in the NFIP Community Rating System (CRS) program by attending CRS workshop(s) if offered within the county. Join the CRS program if adequate resources to support long term participation can be dedicated.	0	0	1	1	0	0	1	0	0	1	0	1	0	1	6	Medium

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.



9.25.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.25.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Township of Morris that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Township of Morris has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.25.9 Additional Comments

None at this time.



**Township of Morris
All Hazards Map
2015 Morris County
Hazard Mitigation Plan**

Map showing the Township of Morris, New Jersey, with various hazards and infrastructure. The map includes labels for surrounding municipalities: Randolph Township, Parsippany-Troy Hills Township, Morris Plains Borough, Hanover Township, Mendham Township, Morristown Town, Florham Park Borough, and Florham Park Township.

Legend

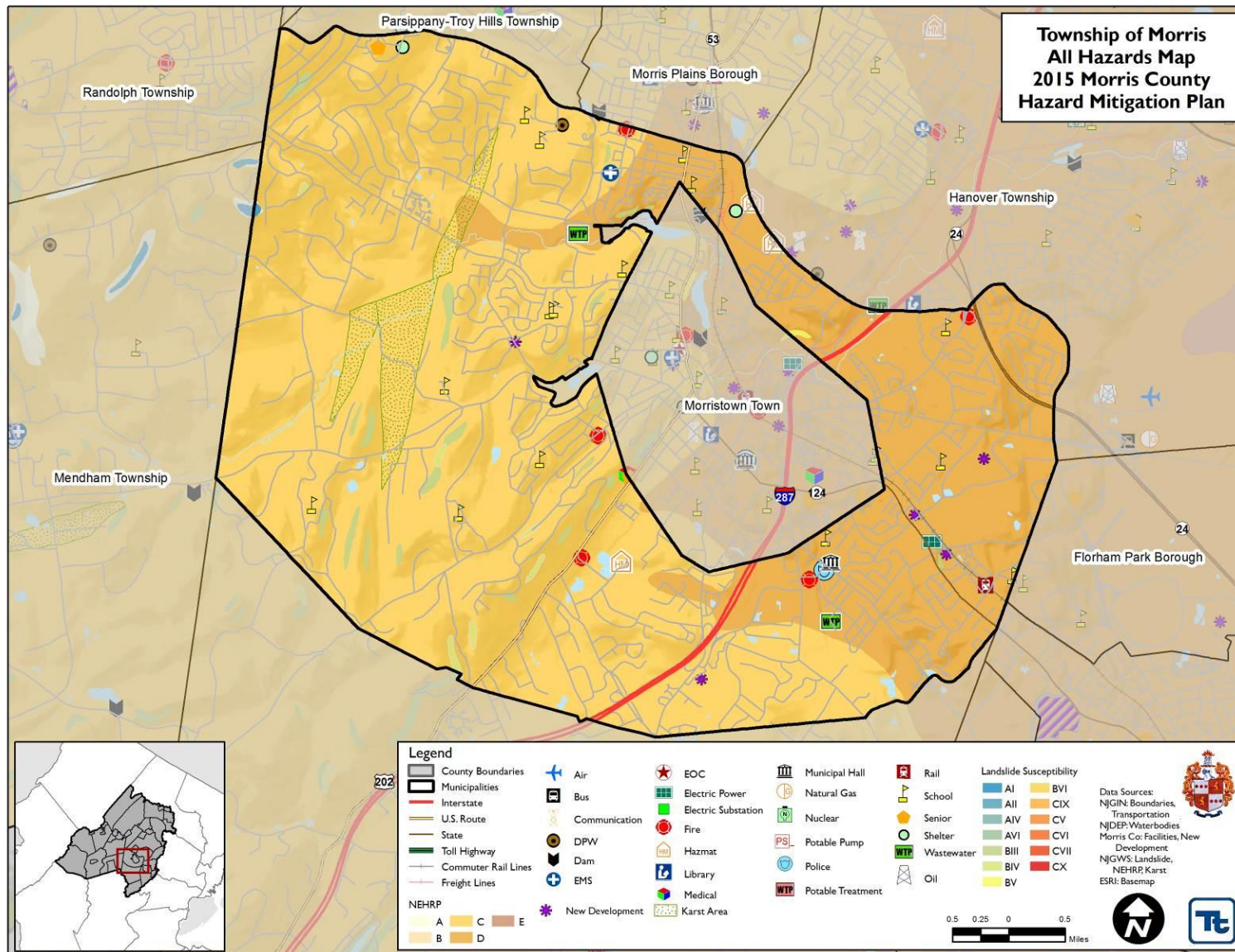
- County Boundaries
- Municipalities
- Interstate
- U.S. Route
- State
- Toll Highway
- Commuter Rail Lines
- Freight Lines
- Air
- Bus
- Communication
- DPW
- Dam
- EMS
- EOC
- Electric Power
- Electric Substation
- Fire
- Hazmat
- Library
- Medical
- New Development
- Municipal Hall
- Natural Gas
- Nuclear
- Potable Pump
- Police
- Potable Treatment
- Rail
- School
- Senior
- Shelter
- Wastewater
- Oil
- Flood
 - 1% Chance of Annual Flooding
 - 0.2% Chance of Annual Flooding
 - NFIP
 - Repetitive Loss
 - Severe Repetitive Loss
- Wildfire
 - Low
 - Moderate
 - High
 - Very High
 - Extreme

Scale: 0.5 0.25 0 0.5 Miles

Data Sources: NJGIN: Boundaries, Transportation, NJDEP: Waterbodies, Wildfire, Morris Co: Facilities, New Development, FEMA: Flood, NFIP, ESRI: Basemap



Figure 9.25-2. Township of Morris Hazard Area Extent and Location Map 2





Action Number:	TM-1
Mitigation Action/Initiative:	Construction of a detention basin to mitigate upstream on Loantaka Brook

Assessing the Risk	
Hazard(s) addressed:	Flooding, Severe Storm, Severe Winter Storm
Specific problem being mitigated:	During severe rain events, flooding can cause damage to properties as well as inhibit travel along flooded roadways.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Do nothing – will not solve erosion/flooding problem
	2. Purchase homes – not cost effective
	3. Expand existing channel – not feasible, neighbors will lose yards and that project would most likely not be permitable with NJDEP
Action/Project Intended for Implementation	
Description of Selected Action/Project	The detention basin will hold stormwater before it is able to runoff into the brook.
Action/Project Category	SIP
Goals/Objectives Met	G-4
Applies to existing, future, or not applicable	Future structure
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Township Engineer
Local Planning Mechanism	TBD
Potential Funding Sources	FEMA, Municipal Budget
Timeline for Completion	Short
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 2/12/15 Progress on Action/Project: Consultant hired to study watershed and review options to reduce flows downstream, detention design options.



Action Number: TM-1

Mitigation Action/Initiative: Construction of a detention basin to mitigate upstream on Loantaka Brook

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Protect surrounding properties from flood damage
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	1	Project will take less than five years to complete
Local Champion	1	
Other Community Objectives	0	
Total	10	
Priority (High/Med/Low)	High	Project being advanced



Action Number:	TM-2
Mitigation Action/Initiative:	Replacement of the Fill-A-Belli Deli Culvert and detention basin construction

Assessing the Risk	
Hazard(s) addressed:	Flooding, Severe Storm, Severe Winter Storm
Specific problem being mitigated:	During severe rain events, flooding can cause damage to properties as well as inhibit travel along flooded roadways.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Do nothing – Area will continue to flood
	2. Replacement of culvert and detention basis construction
	3.
Action/Project Intended for Implementation	
Description of Selected Action/Project	The proposed project will update the existing culvert and allow for improved stormwater drainage. Constructing the detention basin will add to the effects of the upgraded culvert.
Action/Project Category	SIP
Goals/Objectives Met	G-4
Applies to existing, future, or not applicable	Existing structure
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Township Engineer
Local Planning Mechanism	TBD
Potential Funding Sources	FEMA, Municipal Budget
Timeline for Completion	Short
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 2/12/15 Progress on Action/Project: Consultant hired, project designed, permits obtained, working on obtaining required easements, project to be bid in 2015.



Action Number:

TM-2

Mitigation Action/Initiative:

Replacement of the Fill-A-Belli Deli Culvert and detention basin construction

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Prevent flooding of roadways and damaging properties
Property Protection	1	Prevent flooding of roadways and damaging properties
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm, Severe Winter Storm
Timeline	1	
Local Champion	1	
Other Community Objectives	0	
Total	13	
Priority (High/Med/Low)	High	Project advancing towards construction



Action Number: TM-3

Mitigation Action/Initiative: Construction of a Salt Dome to mitigate snow hazard on roads

Assessing the Risk	
Hazard(s) addressed:	Severe Winter Storm
Specific problem being mitigated:	Heavy snowfall during a winter storm can cause dangerous road conditions. This can cause potential issues with travel, as well as with the ability of emergency vehicles to respond to emergencies.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Do nothing – continue to truck salt from the other side of town
	2. Construct Salt Dome
	3.
Action/Project Intended for Implementation	
Description of Selected Action/Project	The Salt Dome will store salt within the Township and allow for effective distribution along the roadways prior, during and after a severe winter storm.
Action/Project Category	SIP
Goals/Objectives Met	G-4
Applies to existing, future, or not applicable	Future structure
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Township Engineer
Local Planning Mechanism	TBD
Potential Funding Sources	FEMA, Municipal Budget
Timeline for Completion	Long Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 2/12/15 Progress on Action/Project: Property for future salt dome needs to be secured



Action Number: TM-3
Mitigation Action/Initiative: Construction of a Salt Dome to mitigate snow hazard on roads

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	
Environmental	0	
Social	0	
Administrative	0	
Multi-Hazard	0	
Timeline	0	
Local Champion	0	
Other Community Objectives	0	
Total	6	
Priority (High/Med/Low)	Medium	Resources needed to advance project



Action Number:	TM-4
Mitigation Action/Initiative:	Acquisition and demolition of two repetitive loss properties located on Western Avenue.

Assessing the Risk	
Hazard(s) addressed:	Flooding, Severe Storm, Severe Winter Storm
Specific problem being mitigated:	Flooding along Western Avenue has caused significant damage and loss to these properties and the owners.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Do nothing – properties will continue to flood w/repetitive losses
	2. Replace culvert – project advancing cannot provide sufficient capacity to eliminate flooding.
	3. Raise structures – not cost effective
Action/Project Intended for Implementation	
Description of Selected Action/Project	The Township is looking to acquire these properties in order to reduce the damages and losses associated with flooding in this area. By acquiring these properties, the Township can use the land for further mitigation or strategies.
Action/Project Category	SIP
Goals/Objectives Met	G-4
Applies to existing, future, or not applicable	Existing structure
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Township Engineer
Local Planning Mechanism	TBD
Potential Funding Sources	FEMA, Municipal Budget
Timeline for Completion	Short
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 2/12/15 Progress on Action/Project: Working with Morris County to purchase property and convert area to open space.



Action Number: TM-4

Mitigation Action/Initiative: Acquisition and demolition of two repetitive loss properties located on Western Avenue.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Local Champion	1	
Other Community Objectives	1	
Total	14	
Priority (High/Med/Low)	High	Advancing project with Morris County



Action Number:

TM-5

Mitigation Action/Initiative:

Acquisition/elevation or flood proofing of nine repetitive loss properties located on Richlyn Avenue.

Assessing the Risk	
Hazard(s) addressed:	Flooding, Severe Storm, Severe Winter Storm
Specific problem being mitigated:	Flooding along Richlyn Avenue has caused significant damage and loss to these properties and the owners.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Do nothing – properties will continue to flood
	2. Raise structures/flood proofing – feasibility needs to be investigated.
	3.
Action/Project Intended for Implementation	
Description of Selected Action/Project	The Township is looking at options to reduce the damages and losses associated with flooding in this area. By acquiring these properties, the Township can use the land for further mitigation or strategies. The elevations will bring the main floor of each property above the base flood elevation.
Action/Project Category	SIP
Goals/Objectives Met	G-4
Applies to existing, future, or not applicable	Existing structure
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	Low
Plan for Implementation	
Responsible Organization	Township Engineer
Local Planning Mechanism	TBD
Potential Funding Sources	FEMA, Municipal Budget
Timeline for Completion	Long Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 2/12/15 Progress on Action/Project: No progress

**Action Number:**

TM-5

Mitigation Action/Initiative:

Acquisition/elevation or flood proofing of nine repetitive loss properties located on Richlyn Avenue.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Not sure if losses make this project cost effective
Technical	0	
Political	0	
Legal	0	
Fiscal	-1	Not sure if losses make this project cost effective and if it would qualify for funding
Environmental	0	
Social	-1	Project has the potential to disrupt an established neighborhood
Administrative	0	
Multi-Hazard	0	
Timeline	-1	Project cannot be completed in less than 5 years
Local Champion	1	
Other Community Objectives	0	
Total	1	
Priority (High/Med/Low)	Low	Additional investigation needed, seems to be little support from property owners, personal needed to advance project